

Appl. No. 10/720,308
Amendment dated April 27, 2007
Reply to Office Action of December 27, 2007

TMI-5008

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REMARKS / ARGUMENTS

Claims 14-32 remain pending in this application

35 U.S.C. §§102 and 103

Claims 14-17, 23-26 and 32 stand rejected under 35 U.S.C. §102(b) as being anticipated by Allen et al (U.S. Patent No. 5,546,557). Claims 20, 22 and 27-29 stand rejected under 35 U.S.C. §103(a) as being obvious over Allen et al in view of Ofek (U.S. Patent No. 6,101,497). Claims 18-19 and 30-31 stand rejected under 35 U.S.C. §103(a) as being obvious over Allen et al in view of Sekido (U.S. Patent No. 6,311,193). Claim 21 stands rejected 35 U.S.C. §103(a) as being obvious over Allen et al as applied to claim 19, and further in view of Ofek. These rejections are traversed as follows.

The claims have been amended to more clearly recite the present invention and to clearly distinguish the present invention from the cited art. Independent claim 14 is now directed to a data storage apparatus coupled to a computer and having a control unit, a memory coupled to the control unit and a plurality of non-removable storage devices coupled to the control unit. First and second storage volumes are configured on the storage devices. The control unit processes a command transmitted from the computer. The memory stores data that is necessary for such processing. When the control unit virtualizes at least one of the non-removable

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storage devices as a virtualized removable storage drive for the computer, the first storage volume is mapped to the virtualized removable storage drive and the second storage volume is not mapped to the virtualized removable storage drive in a volume management table stored in the memory. In response to a verification command issued by the computer, the control unit replies with identification information of the virtualized removable storage drive so that the computer recognizes the first storage volume as a volume that is separate from the second storage volume and one which the computer should recognize when the computer is booted. Therefore, when certain non-removable storage devices are virtualized as removable storage drives by the control unit, and upon mapping the first storage volume to these virtualized removable storage drives, the computer can recognize the first storage volume as a volume in response to a verification command sent from the computer to which the control unit replies with identification information of the virtualized removable storage drives.

None of the cited references disclose these features of the presently claimed invention. For example, Allen et al disclose a peripheral data storage subsystem that has means for responding to a MOUNT command received from a host processor to create and mount a host-processor-addressable logical data-storage volume (see Abstract). However, Allen et al do not disclose the virtualizing of non-removable storage devices by the control unit as presently claimed. In addition, Allen et al do not disclose mapping a first storage volume to the virtualized removable storage

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drives and providing identification information for the virtualized removable storage drives in response to a verification command issued by the computer so that the computer can recognize the first storage volume as a volume upon booting.

Independent claim 23 uses different language from claim 14, but is patentable for similar reasons. As such, it is submitted that the pending claims patenably define the present invention over the cited art.

Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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